

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/07/2016

Reviewed on 07/07/2016

1 Identification

- **Product identifier**
- **Trade name:** Bulk Bond® 1423
- **Article number:** B1423
- **Application of the substance / the mixture** Metal surface treatment
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bulk Chemicals Inc.
1074 Stinson Drive
READING, PA 19605
USA
- **Information department:**
Product safety department
info@bulkchemicals.us
- **Emergency telephone number:** CHEMTREC 1-800-424-9300, outside US +1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Sens. 1 H317 May cause an allergic skin reaction.

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- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05

GHS07

GHS08

- **Signal word** *Danger*

- **Hazard-determining components of labeling:**

Chromic acid

hydrofluoric acid

phosphoric acid

- **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

Do not breathe dusts or mists.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7664-38-2	phosphoric acid	10-<25%
7738-94-5	Chromic acid	2.5-<10%
7664-39-3	hydrofluoric acid	2.5-<10%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
 - Immediately remove any clothing soiled by the product.
 - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 - Remove breathing apparatus only after contaminated clothing have been completely removed.
 - In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
 - Supply fresh air or oxygen; call for doctor.
 - In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
 - Seek medical treatment.
 - Call a doctor immediately.
 - Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
 - Rinse opened eye for several minutes under running water. Then consult a doctor.
 - Check for and remove any contact lenses
- **After swallowing:**
 - Do not induce vomiting; immediately call for medical help.
 - Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
 - Gastric or intestinal disorders
 - Nausea
 - skin irritation
 - eye irritation
 - burns to skin or eyes
 - Nasal and respiratory tract irritation
 - Medical conditions may be aggravated by exposure
 - Kidney damage
 - Llver Damage
- **Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Full firefighting gear and SCBA

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Only handle and refill product in closed systems.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**
Protect from frost.
Store in dry conditions.
Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7664-38-2 phosphoric acid

PEL Long-term value: 1 mg/m³

REL Short-term value: 3 mg/m³
Long-term value: 1 mg/m³

TLV Short-term value: 3 mg/m³
Long-term value: 1 mg/m³

7738-94-5 Chromic acid

PEL Long-term value: 0.005* mg/m³
Ceiling limit value: 0.1** mg/m³
*as Cr(VI) **as CrO₃; see 29 CFR 1910.1026

REL Long-term value: 0.0002 mg/m³
as Cr; See Pocket Guide Apps. A and C

TLV Long-term value: 0.05 mg/m³
as Cr; BEI

7664-39-3 hydrofluoric acid

PEL Long-term value: 3 ppm
as F

REL Long-term value: 2.5 mg/m³, 3 ppm
Ceiling limit value: 5* mg/m³, 6* ppm
*15-min, as F

TLV Long-term value: 0.41 mg/m³, 0.5 ppm
Ceiling limit value: 1.64 mg/m³, 2 ppm
as F; Skin, BEI

· **Ingredients with biological limit values:**

7664-39-3 hydrofluoric acid

BEI 3 mg/g creatinine
urine
prior to shift
Fluorides (background, nonspecific)

10 mg/g creatinine
urine
end of shift
Fluorides (background, nonspecific)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

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Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses



Tightly sealed goggles

Faceshield

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Light red
Odor:	Odorless
Odor threshold:	Not determined.

· pH-value at 15.6 °C (60 °F): 1

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	19 °C (66 °F)

· **Flash point:** Not applicable.

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· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)
· Density at 20 °C (68 °F):	1.25 g/cm ³ (10.431 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Water:	59.4 %
VOC content:	0.0 g/l / 0.00 lb/gl
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

7664-39-3 hydrofluoric acid

Oral LD50 1276 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Strong caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Corrosive

Irritant

Very toxic

Danger through skin absorption.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic.

The product can cause inheritable damage.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

7738-94-5 Chromic acid

I

- **NTP (National Toxicology Program)**

7738-94-5 Chromic acid

K

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:** Toxic for fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

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Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA** UN2922

· **UN proper shipping name**

· **DOT**

Corrosive liquids, toxic, n.o.s. (Chromic acid)

· **ADR**

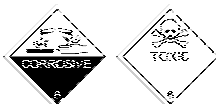
2922 Corrosive liquids, toxic, n.o.s. (Chromic acid),
ENVIRONMENTALLY HAZARDOUS

· **IMDG, IATA**

CORROSIVE LIQUID, TOXIC, N.O.S. (Chromic acid)

· **Transport hazard class(es)**

· **DOT**



· **Class**

8 Corrosive substances

· **Label**

8, 6.1

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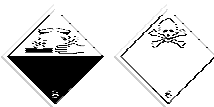
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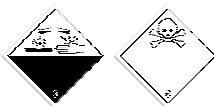
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· **ADR**

· **Class** 8 Corrosive substances
 · **Label** 8+6.1

· **IMDG**

· **Class** 8 Corrosive substances
 · **Label** 8/6.1

· **IATA**

· **Class** 8 Corrosive substances
 · **Label** 8 (6.1)

· **Packing group**
 · **DOT, ADR, IMDG, IATA** II

· **Environmental hazards:** Product contains environmentally hazardous substances:
 Chromic acid
 · **Marine pollutant:** Yes
 · **Special marking (ADR):** Symbol (fish and tree)

· **Special precautions for user** Warning: Corrosive substances
 · **Danger code (Kemler):** 886
 · **EMS Number:** F-A,S-B
 · **Segregation groups** Acids
 · **Stowage Category** B
 · **Stowage Code** SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**
 · **Quantity limitations** On passenger aircraft/rail: 1 L
 On cargo aircraft only: 30 L
 · **Remarks:** Reportable Quantity "RQ" required all sizes
 Reportable Quantity "RQ" required all sizes

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· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 2922 CORROSIVE LIQUIDS, TOXIC, N.O.S. (CHROMIC ACID), 8 (6.1), II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

7664-39-3	hydrofluoric acid
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· Section 313 (Specific toxic chemical listings):

7664-38-2	phosphoric acid
7738-94-5	Chromic acid
7664-39-3	hydrofluoric acid

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· New Jersey Right to Know

7664-38-2	phosphoric acid
7738-94-5	Chromic acid
7664-39-3	hydrofluoric acid

· Pennsylvania Right to Know

7664-38-2	phosphoric acid
7738-94-5	Chromic acid
7664-39-3	hydrofluoric acid

· Proposition 65

· Chemicals known to cause cancer:

7738-94-5	Chromic acid
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· Chemicals known to cause reproductive toxicity for females:

7738-94-5	Chromic acid
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· Chemicals known to cause reproductive toxicity for males:

7738-94-5	Chromic acid
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· **Chemicals known to cause developmental toxicity:**

7738-94-5	Chromic acid
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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

7738-94-5	Chromic acid	A(inh), D(oral), K/L(inh), CBD(oral)
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· **TLV (Threshold Limit Value established by ACGIH)**

7738-94-5	Chromic acid	AI
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

7738-94-5	Chromic acid
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· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05

GHS07

GHS08

· **Signal word Danger**

· **Hazard-determining components of labeling:**

Chromic acid

hydrofluoric acid

phosphoric acid

· **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dusts or mists.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:**

Environmental,
Safety and Health

· **Contact:** SDS Coordinator

· **Date of preparation / last revision** 07/07/2016 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 1B: Germ cell mutagenicity – Category 1B

Carc. 1B: Carcinogenicity – Category 1B

Repr. 2: Reproductive toxicity – Category 2

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1